Trend Study 18-24-02

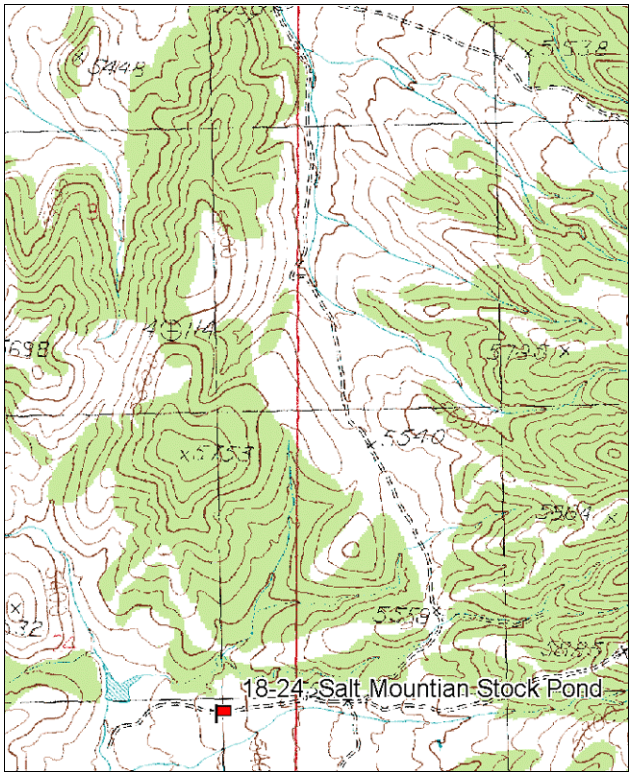
Study site name: Salt Mountain Stock Pond . Vegetation type: Chained, Seeded PJ .

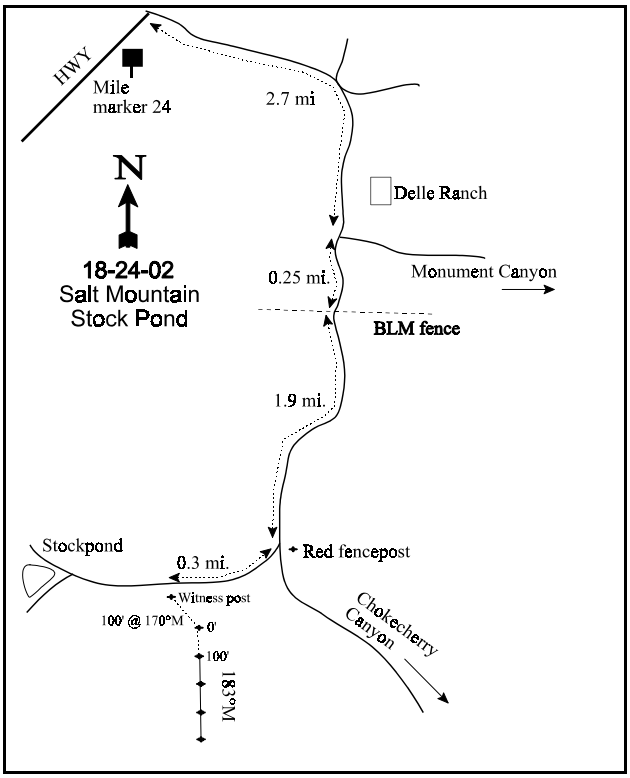
Compass bearing: frequency baseline 183 degrees magnetic.

Frequency belt placement: line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

LOCATI0N DESCRIPTI0N

Turn off highway between mile mark 24 and 25. From the highway, go 2.7 miles staying right on the main road to Delle Ranch ponds and trees. The road then turns south. From Delle Ranch, proceed south towards Salt Mountain, to an intersection to the right (west) heading to Salt Mountain. There will be a red post on the east side of the intersection. Turn right and proceed 0.30 miles to a witness post on the left side of the road. From the witness post, the 0-foot baseline stake is 21 paces away at an azimuth of 185 degrees magnetic. The study is marked by green steel "T" fenceposts approximately 12 to 18 inches in height. The 0-foot baseline stake has a browse tag, number 5926, attached.





Map Name: Salt Mountain

Diagrammatic Sketch

Township 3S , Range 8W , Section 24

GPS: NAD 27, UTM 12S 4488909 N 356979 E

DISCUSSION

Salt Mountain Stock Pond - Trend Study No. 18-24

The Salt Mountain Stock Pond study is located on a chained and seeded juniper-pinyon woodland immediately east of Salt Mountain. The area was retreated between the 1983 and 1989 readings to remove most of the remaining juniper trees. In the past, the area has been important deer winter range and also provides summer grazing for cattle. An old pellet group transect traverses the immediate study area. The site slopes very gently to the southwest at an elevation of approximately 5,400 feet. Pellet group transect data from 2002 estimated 27 deer days use/acre (74 ddu/ha). There was no cattle use on site in 2002, but cow use from the previous summer (2001) was estimated at 8 cow days use/acre (22 cdu/ha).

Soil has been alluvially deposited and is medium to fine textured. The soil textural analysis indicates a sandy clay loam with a moderately alkaline soil reaction (pH 7.9). Effective rooting depth is estimated at almost 13 inches. However, the soil temperature was relatively high averaging 70° F at 13 inches in depth. The high soil temperature could be limiting to the germination and establishment of cool season perennial species. The amount of phosphorus is low at only 4.8 ppm which could be a limiting factor for the establishment of plant species. Values of at least 10 ppm are thought to be the minimum. A few large rocks are present on the soil surface. The area initially showed evidence of moderate sheet erosion. This resulted largely from trampling by cattle and a general lack of good protective ground cover. Cover of bare soil was quite high in 1983, averaging nearly 34%. This has declined to only 16% in 1997 and 2002. Currently, there is minimal erosion occurring and the erosion condition class was determined to be slight in 2002.

Vegetative composition is dominated by a relatively sparse stand of Wyoming big sagebrush interspersed with Utah juniper trees. Antelope bitterbrush occurs infrequently and is heavily hedged. During the 1983 reading, sagebrush vigor was generally poor. Eighty-six percent of the plants were classified as having moderate to heavy use. This was somewhat surprising in view of the fact that relatively few deer pellet groups were present. Many plants had a yellow or chlorotic appearance, which may be indicative of a shallow hardpan, a serious iron deficiency, or an insect or disease problem. Initially, sagebrush age structure included a large number of decadent plants (40%), probably resulting from the combination of poor vigor and heavy use. Since 1983, sagebrush has maintained a stable density of about 3,000 plants/acre. Utilization was mostly light to moderate from 1989-2002. The number of decadent plants has remained relatively high ranging from 43% in 1989 to 31% in 2002. Vigor was poor on the majority of the decadent plants in 1989 and 2002. The number of dead plants sampled in 1997 and 2002 was low, while young recruitment was good with 18% and 22% of the population respectively consisting of young plants. As stated earlier, the population has remained stable since 1989, but it appears that this may be a marginal site for Wyoming big sagebrush. Even with light use, the population maintains moderately high rates of decadency and poor vigor. Annual leader growth was relatively good in 2002 averaging 1.5 inches.

Although the area was seeded, Sandberg bluegrass, a native species, was the most abundant (89% quadrat frequency) perennial grass in 1983. Fairway crested wheatgrass was the only seeded species encountered and it had a quadrat frequency of 42%. Initial forage production was rather low. Crested wheatgrass has increased significantly in frequency with each reading. By 2002, it accounted for 82% of the total grass cover and 81% of the total herbaceous cover. Sandberg bluegrass is still abundant but declined significantly in nested frequency in 2002. Forb composition is diverse but most species occur infrequently. It is composed entirely of native species which offer little forage value to wintering deer.

1983 APPARENT TREND ASSESSMENT

In spite of nearly level terrain, this site has noticeably eroded. The trampling effect of cattle and lack of a vigorous herbaceous component has resulted in an excessive amount of erosion pavement and bare ground. Vigor of seeded grasses and native shrubs is less than desirable. These conditions have all contributed to apparent increases in cheatgrass brome, broom snakeweed, and annual forbs. Status of the key browse species, Wyoming big sagebrush, is questionable. It has poor vigor and an unfavorable age structure. However, our opinion is that it could recover quickly if granted some respite from use.

1989 TREND ASSESSMENT

Since the reading in 1983, portions of the old chaining have been retreated for the removal of most of the young trees. The trend for soil is slightly improved with more vegetative cover and less bare soil. The key shrub for the site is Wyoming big sagebrush which shows a slightly downward trend due to an increase in percent decadence to 43% and a loss of about one-third of the population. Those classified with poor vigor have decreased, but not substantially. The trend for sagebrush is still slightly downward with the added depressing effects of extended drought. For the herbaceous understory, it shows a slight improvement with significantly improved values for crested wheatgrass. The forbs are still a very minor component of the understory.

TREND ASSESSMENT
soil - slightly upward (4)
browse - slightly downward (2)
herbaceous understory - slightly upward (4)

1997 TREND ASSESSMENT

Percent bare soil has been decreasing since 1983 when it was at its highest (34%). Now percent bare soil is at its lowest level (16%), while rock and pavement cover have remained about the same. With an increase in herbaceous cover, trend for soil is slightly improved. Trend for the key browse species, Wyoming big sagebrush, is considered stable at this time. However, this would be dependent on what happens to the decadent portion of the population in which 58% of them were classified as dying. The noxious increaser, broom snakeweed, has shown an alarming increase in its density, from 200 to 4,540 plants/acre. This higher density could be mostly reflective of the much larger sample size giving a greatly increased accuracy for estimating browse populations. However, the population also has the characteristics of an increasing population with a high proportion of young plants in the population (29%). The herbaceous understory (perennial component) has shown slight improvements through time, but only minimally. The most significant improvement has come from crested wheatgrass where its sum of nested frequency has almost doubled since 1989. There has also been some improvement in the forbs, but they still make up an almost insignificant portion of the herbaceous understory (12%) and 55% of the forb cover comes from bur buttercup.

TREND ASSESSMENT
soil - slightly improved (4)
browse - stable (3)
herbaceous understory - slightly improved (4)

2002 TREND ASSESSMENT

Trend for soil is stable with similar ground cover characteristics compared to 1997. There is adequate protective ground cover to prevent most erosion. Trend for the key browse species, Wyoming big sagebrush, is stable. Density is unchanged, use is mostly light, and percent decadence is similar to 1997 levels at 31%. The number of decadent plants is still moderately high and half of them were classified as dying in 2002. Young recruitment remains good with 22% of the population consisting of young plants. This is adequate to maintain the stand at current levels. The increaser, broom snakeweed, has remained stable at 4,680 plants/acre in 2002. The population is mostly mature. Trend for the herbaceous understory is stable. Sum of nested frequency for perennial grasses has remained stable, while frequency of perennial forbs has declined. However, forbs are not abundant and contribute little forage. Composition of perennial grasses has changed with the nested frequency of crested wheatgrass increasing significantly and frequency of Sandberg bluegrass declined significantly. Crested wheatgrass now provides 82% of the total grass cover or 81% of the total herbaceous cover. Cheatgrass is present but not abundant.

TREND ASSESSMENT
soil - stable (3)
browse - stable (3)
herbaceous understory - stable (3)

HERBACEOUS TRENDS --
Herd unit 18 , Study no: 24

Type	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'83	'89	'97	'02	'83	'89	'97	'02	'97	'02
G	Agropyron cristatum	a102	b145	c267	d283	42	58	87	88	16.01	23.15
G	Agropyron spicatum	10	3	-	12	5	1	-	3	-	.68
G	Bromus japonicus (a)	-	-	25	27	-	-	8	12	.11	.09
G	Bromus tectorum (a)	-	-	134	152	-	-	44	55	1.77	2.19
G	Poa secunda	b239	b221	ab205	a169	89	80	79	68	3.64	2.03
G	Sitanion hystrix	a1	b18	a-	a3	1	6	-	1	-	.15
G	Vulpia octoflora (a)	-	-	-	1	-	-	-	1	-	.00
Total for Annual Grasses		0	0	159	180	0	0	52	68	1.88	2.28
Total for Perennial Grasses		352	387	472	467	137	145	166	160	19.65	26.02
Total for Grasses		352	387	631	647	137	145	218	228	21.54	28.30
F	Agoseris glauca	10	12	8	4	7	8	4	3	.02	.01
F	Alyssum alyssoides (a)	-	-	5	2	-	-	2	2	.01	.01
F	Antennaria rosea	b25	b24	a6	a2	11	15	2	1	.03	.00
F	Astragalus cibarius	b36	a-	b29	a3	17	-	13	2	.35	.01
F	Astragalus convallarius	-	-	-	-	-	-	-	-	-	-
F	Astragalus spp.	-	-	1	-	-	-	1	-	.00	-
F	Astragalus utahensis	1	2	2	-	1	1	2	-	.07	-
F	Castilleja linariaefolia	2	-	2	-	1	-	1	-	.00	-
F	Camelina microcarpa (a)	-	-	12	2	-	-	5	1	.02	.00
F	Calochortus nuttallii	b17	a-	ab17	a1	12	-	7	1	.04	.00
F	Castilleja spp.	-	-	3	-	-	-	1	-	.00	-
F	Chaenactis douglasii	ab5	a1	b18	a-	3	1	8	-	.06	-

Type	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'83	'89	'97	'02	'83	'89	'97	'02	'97	'02
F	Cirsium neomexicanum	6	5	5	-	2	3	3	-	.06	-
F	Collinsia parviflora (a)	-	-	3	10	-	-	1	4	.00	.02
F	Crepis acuminata	-	-	2	-	-	-	1	-	.00	-
F	Cryptantha spp.	-	2	-	-	-	1	-	-	-	-
F	Descurainia pinnata (a)	-	-	-	3	-	-	-	1	-	.00
F	Draba spp. (a)	-	-	5	-	-	-	2	-	.01	-
F	Epilobium brachycarpum (a)	-	-	9	-	-	-	4	-	.07	-
F	Erodium cicutarium (a)	-	-	-	6	-	-	-	2	-	.03
F	Eriogonum spp.	2	-	-	-	1	-	-	-	-	-
F	Helianthus annuus (a)	-	9	-	-	-	4	-	-	-	-
F	Holosteum umbellatum (a)	-	-	$_{a}$5	$_{b}$42	-	-	2	20	.01	.12
F	Lactuca serriola	-	-	1	-	-	-	1	-	.00	-
F	Machaeranthera canescens	$_{a}$4	$_{a}$3	$_{b}$20	$_{a}$-	2	1	8	-	.06	-
F	Microsteris gracilis (a)	-	-	4	8	-	-	1	4	.00	.02
F	Oenothera spp.	2	-	-	-	1	-	-	-	-	-
F	Penstemon spp.	$_{A}$-	$_{ab}$2	$_{b}$10	$_{a}$-	-	2	6	-	.08	-
F	Phlox longifolia	-	-	8	1	-	-	3	1	.01	.00
F	Ranunculus testiculatus (a)	-	-	$_{b}$167	$_{a}$48	-	-	53	20	1.67	.15
F	Senecio multilobatus	6	-	-	1	2	-	-	1	-	.00
F	Tragopogon dubius	$_{ab}$4	$_{a}$-	$_{b}$7	$_{a}$-	2	-	5	-	.07	-
F	Trifolium spp.	-	-	1	-	-	-	1	-	.00	-
F	Zigadenus paniculatus	-	-	2	-	-	-	1	-	.00	-
Total for Annual Forbs		0	9	210	121	0	4	70	54	1.81	0.37
Total for Perennial Forbs		120	51	142	12	62	32	68	9	0.92	0.04
Total for Forbs		120	60	352	133	62	36	138	63	2.74	0.41

Values with different subscript letters are significantly different at alpha = 0.10

BROWSE TRENDS --
Herd unit 18 , Study no: 24

Type	Species	Strip Frequency '97	Strip Frequency '02	Average Cover % '97	Average Cover % '02
B	Artemisia tridentata wyomingensis	73	63	9.63	8.08
B	Atriplex canescens	0	1	-	-
B	Chrysothamnus nauseosus	1	0	.00	-
B	Chrysothamnus viscidiflorus viscidiflorus	1	1	-	.15
B	Gutierrezia sarothrae	63	70	1.08	2.32
B	Juniperus osteosperma	5	5	-	1.62
B	Opuntia spp.	2	2	-	-
Total for Browse		145	142	10.71	12.18

CANOPY COVER -- LINE INTERCEPT
Herd unit 18 , Study no: 24

Species	Percent Cover '97	Percent Cover '02
Artemisia tridentata wyomingensis	-	9.00
Gutierrezia sarothrae	-	2.75
Juniperus osteosperma	-	1.33

Key Browse Annual Leader Growth
Herd unit 18 , Study no: 24

Species	Average leader growth (in) '02
Artemisia tridentata wyomingensis	1.5

Point-Quarter Tree Data
Herd unit 18 , Study no: 24

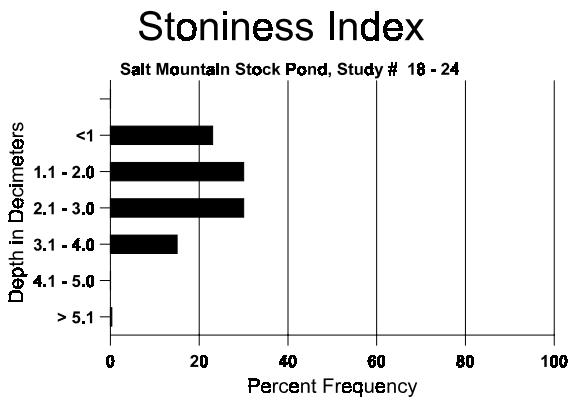
Species	Trees per Acre '02	Average diameter (in) '02
Juniperus osteosperma	51	1.9

BASIC COVER --
Herd unit 18 , Study no: 24

Cover Type	Nested Frequency		Average Cover %			
	'97	'02	'83	'89	'97	'02
Vegetation	361	357	2.25	15.00	36.75	41.09
Rock	80	83	.25	.50	.83	1.85
Pavement	268	222	10.00	7.25	7.19	4.97
Litter	391	389	52.00	49.50	45.63	48.98
Cryptogams	160	122	2.00	.50	3.69	2.94
Bare Ground	270	254	33.50	27.25	16.01	16.11

SOIL ANALYSIS DATA --
Herd Unit 18, Study no: 24, Salt Mountain Stock Pond

Effective rooting depth (in)	Temp °F (depth)	pH	%sand	%silt	%clay	%0M	PPM P	PPM K	dS/m
12.73	69.5 (12.8)	7.6	52.0	20.4	27.6	2.1	4.8	224.0	0.5



PELLET GROUP FREQUENCY --
Herd unit 18 , Study no: 24

Type	Quadrat Frequency	
	'97	'02
Sheep	2	-
Rabbit	12	49
Deer	18	12
Cattle	2	4

Pellet Transect	
Pellet Groups per Acre '02	Days Use per Acre (ha) '02
-	-
-	-
357	27 (74)
96	8 (22)

BROWSE CHARACTERISTICS --
Herd unit 18 , Study no: 24

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Artemisia tridentata wyomingensis																		
S	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	43	-	-	-	-	-	11	-	-	54	-	-	-	1800			54
	97	26	-	-	-	-	-	-	-	-	26	-	-	-	520			26
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	83	2	-	-	-	-	-	-	-	-	2	-	-	-	66			2
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	26	2	-	-	-	-	-	-	-	25	-	1	-	560			28
	02	32	-	-	1	-	-	-	-	-	33	-	-	-	660			33
M	83	16	29	38	-	-	-	-	-	-	24	37	22	-	2766	24	42	83
	89	46	5	1	-	-	-	-	-	-	49	1	2	-	1733	19	25	52
	97	41	26	8	-	-	-	-	-	-	74	-	1	-	1500	20	36	75
	02	61	12	-	-	-	-	-	-	-	72	1	-	-	1460	19	28	73
D	83	2	31	24	-	-	-	-	-	-	21	25	10	1	1900			57
	89	37	3	-	-	-	-	-	-	-	28	-	7	5	1333			40
	97	29	13	2	-	3	3	-	-	-	21	-	-	29	1000			50
	02	37	10	-	-	-	-	-	-	-	22	-	-	25	940			47
X	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	360			18
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	580			29

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	42%	44%	23%	-35%
'89	09%	01%	15%	- 0%
'97	29%	08%	20%	+ 0%
'02	14%	00%	16%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	4732	Dec:	40%
	'89	3066		43%
	'97	3060		33%
	'02	3060		31%

Atriplex canescens																		
M	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	02	1	-	-	-	-	-	-	-	-	1	-	-	-	20	-	-	1

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	00%	00%	
'89	00%	00%	00%	
'97	00%	00%	00%	
'02	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	0	Dec:	-
	'89	0		-
	'97	0		-
	'02	20		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Chrysothamnus nauseosus																		
Y	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor
'83	00%	00%	00%
'89	00%	00%	00%
'97	00%	00%	00%
'02	00%	00%	00%

%Change

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	0	Dec:	-
	'89	0		-
	'97	20		-
	'02	0		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Chrysothamnus viscidiflorus viscidiflorus																		
M	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	97	1	-	-	-	-	-	-	-	-	1	-	-	-	20	6	9	1
	02	1	-	-	-	-	-	-	-	-	1	-	-	-	20	7	7	1

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor
'83	00%	00%	00%
'89	00%	00%	00%
'97	00%	00%	00%
'02	00%	00%	00%

%Change

+ 0%

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	0	Dec:	-
	'89	0		-
	'97	20		-
	'02	20		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Gutierrezia sarothrae																		
S	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	15	-	-	1	-	-	-	-	-	16	-	-	-	320			16
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	65	1	-	-	-	-	-	-	-	66	-	-	-	1320			66
	02	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
M	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	89	6	-	-	-	-	-	-	-	-	6	-	-	-	200	10	11	6
	97	157	-	-	-	-	-	-	-	-	157	-	-	-	3140	11	19	157
	02	204	-	-	1	-	-	-	-	-	194	1	10	-	4100	6	9	205
D	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	4	-	-	-	-	-	-	-	-	2	-	-	2	80			4
	02	28	-	-	-	-	-	-	-	-	9	-	9	10	560			28
X	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	560			28

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	00%	00%	
'89	00%	00%	00%	+96%
'97	.44%	00%	.88%	+ 3%
'02	00%	00%	12%	

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	0	Dec:	0%
	'89	200		0%
	'97	4540		2%
	'02	4680		12%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Juniperus osteosperma																		
S	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	-	-	-	1	-	-	-	-	-	1	-	-	-	20			1
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	83	3	-	-	-	-	-	-	-	-	3	-	-	-	100			3
	89	3	-	-	-	-	-	-	-	-	3	-	-	-	100			3
	97	4	-	-	-	-	-	-	-	-	4	-	-	-	80			4
	02	-	-	-	1	-	-	-	-	-	1	-	-	-	20			1
M	83	6	-	-	-	-	-	-	-	-	4	-	2	-	200	56	56	6
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	97	1	-	-	-	-	-	-	-	-	1	-	-	-	20	-	-	1
	02	4	-	-	-	-	-	-	-	-	4	-	-	-	80	-	-	4
X	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	140			7
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	220			11

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	00%	22%	-67%
'89	00%	00%	00%	+ 0%
'97	00%	00%	00%	+ 0%
'02	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)					
'83	300	Dec:	-
'89	100		-
'97	100		-
'02	100		-

Opuntia spp.																		
M	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	97	2	-	-	-	-	-	-	-	-	2	-	-	-	40	4	9	2
	02	2	-	-	-	-	-	-	-	-	2	-	-	-	40	-	-	2

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'83	00%	00%	00%	
'89	00%	00%	00%	
'97	00%	00%	00%	+ 0%
'02	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)			
'83	0	Dec:	-
'89	0		-
'97	40		-
'02	40		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Purshia tridentata																		
M	83	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	89	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	97	-	-	-	-	-	-	-	-	-	-	-	-	-	0	8	28	0
	02	-	-	-	-	-	-	-	-	-	-	-	-	-	0	10	54	0

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor
'83	00%	00%	00%
'89	00%	00%	00%
'97	00%	00%	00%
'02	00%	00%	00%

%Change

Total Plants/Acre (excluding Dead & Seedlings)				
	'83	0	Dec:	-
	'89	0		-
	'97	0		-
	'02	0		-